BookletChart™

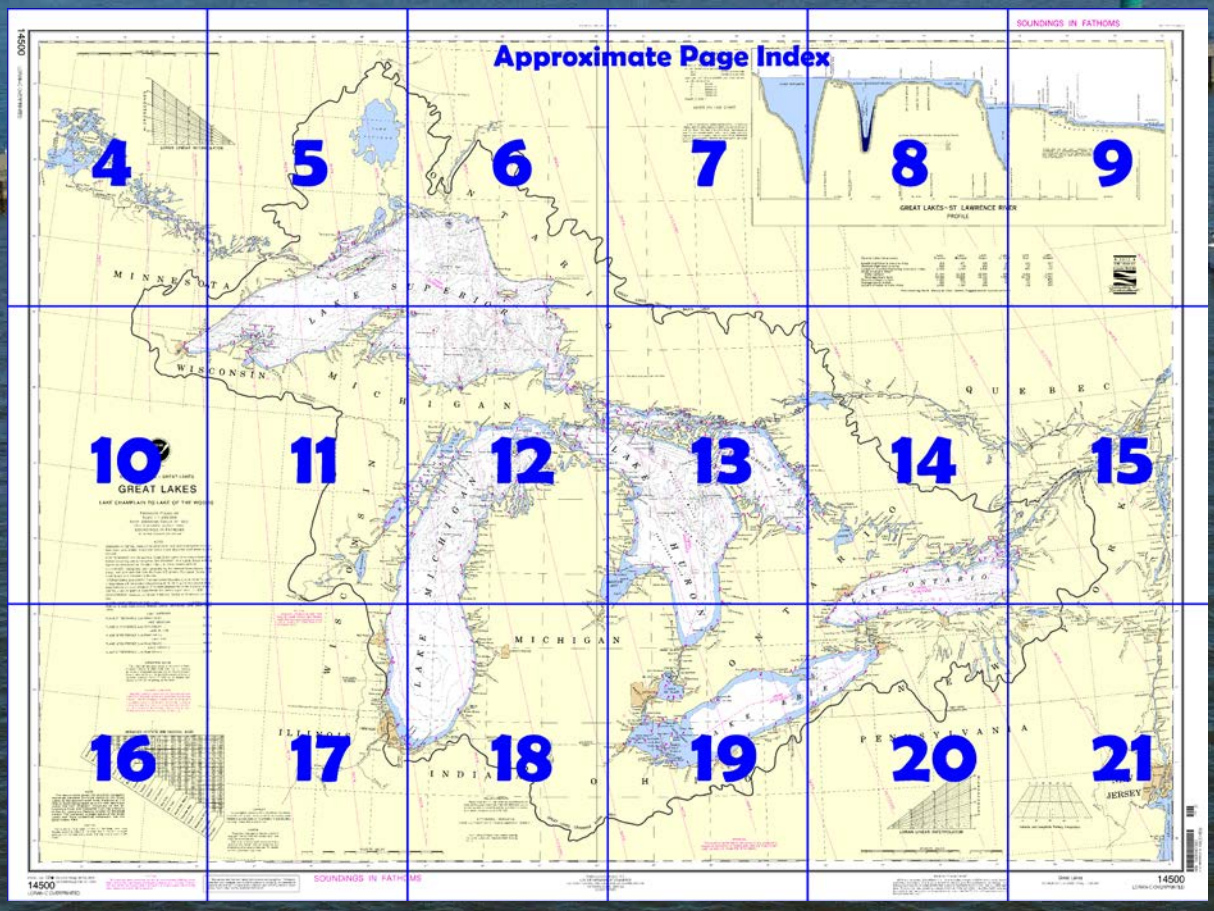
Great Lakes –
Lake Champlain to Lake of the Woods

NOAA Chart 14500

A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.

- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at http://www.NauticalCharts.NOAA.gov.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at http://www.nauticalcharts.noaa.gov/nsd/coastpilot_w.php?book=6

(Selected Excerpts from Coast Pilot)
The **Great Lakes system** includes **Lakes Ontario, Erie, Huron, Michigan,** and **Superior**, their connecting waters, and the **St. Lawrence River**. It is one of the largest concentrations of fresh water on the earth. The system, including the St. Lawrence River above Iroquois Dam, has a total shoreline of about 11,000 statute miles (9,559 nm), a total water surface area of about 95,000 square statute miles (24,600,000 hectares), and a total drainage basin of almost 300,000 square statute miles (77,700,000 hectares). With the opening of the **St. Lawrence Seaway**, the system provides access by oceangoing deep-draft vessels to the great industrial and agricultural heartland of the North American continent. From the **Strait of Belle Isle** at the mouth of the **Gulf of St. Lawrence**, the distance via the St. Lawrence River to Duluth, MN, at the head of Lake Superior is about 2,340 statute miles (2,033 nm) and to Chicago, IL, near the south end of Lake Michigan is about 2,250 statute miles (1,955 nm). About 1,000 statute miles (870 nm) of each of these distances is below Montreal, the head of deepdraft ocean navigation on the St. Lawrence River.

Small craft and barge traffic may also reach the Great Lakes via two shallow-draft routes; from the Gulf of Mexico via the Mississippi River and the Illinois Waterway to Lake Michigan at Chicago, IL, a distance of about 1,530 statute miles (1,329.5 nm), and from New York Harbor via the Hudson River and the New York State Canal System to Lake Ontario at Oswego, NY, a distance of 340 statute miles (295.5 nm), or to the Niagara River at Tonawanda, NY, a distance of 496 statute miles (431 nm).

Navigation regulations.–The U.S. Coast Guard has established **vessel traffic reporting system** and related navigation regulations for the connecting waters from Lake Erie to Lake Huron. The reporting system is operated through the Canadian Vessel Traffic Service Center at Sarnia, ON (See **33 CFR 162.130 through 162.140**, chapter 2, for complete information.)

Vessel Traffic Management.–A **Vessel Traffic Management Contingency Plan (VTM)** for the Detroit and St. Clair Rivers has been agreed upon by the United States Coast Guard and the Canadian Department of Transport. The purpose of the system is to enhance the safety of navigation in the rivers during periods of exceptionally hazardous navigation conditions and to protect the navigable waters of the rivers from environmental harm. These objectives are accomplished by establishing criteria for allowing vessels to transit the system, by managing vessel entries and transits of the system, and by establishing no passing zones as required. The system is implemented only in cases of emergency, upon agreement of the Commander, U.S. Coast Guard Ninth District, and the Director, Central Region, Canadian Department of Transport. The implementation will be promulgated through Broadcast Notice to Mariners.

Danger zones.–Danger zones have been established within the area of this Coast Pilot. (See **33 CFR 334**, chapter 2, for limits and regulations.)

Pilotage.–By International agreement between the United States and Canada, the waters of the Great Lakes and the St. Lawrence River have been divided into designated and undesignated waters for pilotage purposes. In designated waters, registered vessels of the United States and foreign vessels are required to have in their service a United States or Canadian registered pilot. In undesignated waters, registered vessels of the United States and foreign vessels are required to have in their service a United States or Canadian registered pilot or other officer qualified for Great Lakes undesignated waters.

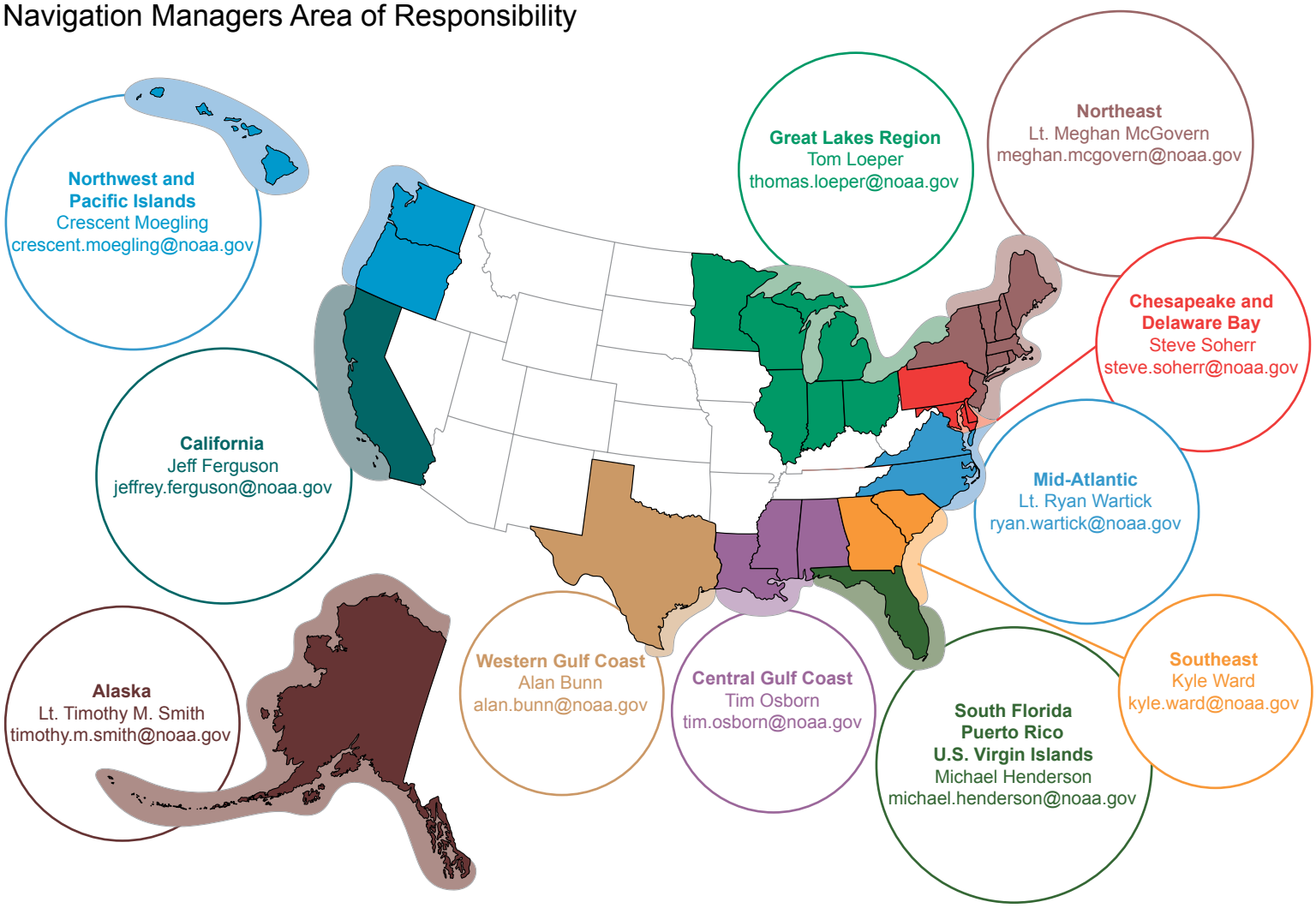
Vessel Arrival Inspections.–Quarantine, customs, immigration, and agricultural quarantine officials are stationed in most major U.S. ports. (See Appendix A for addresses.) Vessels subject to such inspections generally make arrangements in advance through ships' agents. Unless otherwise directed, officials usually board vessels at their berths.

Harbormasters are appointed for some of the principal ports. They have charge of enforcing harbor regulations, and in some instances are in charge of the anchorage and berthing of vessels.

U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies

RCC Cleveland	Commander 9th CG District Cleveland, OH	(216) 902-6117

Navigation Managers Area of Responsibility

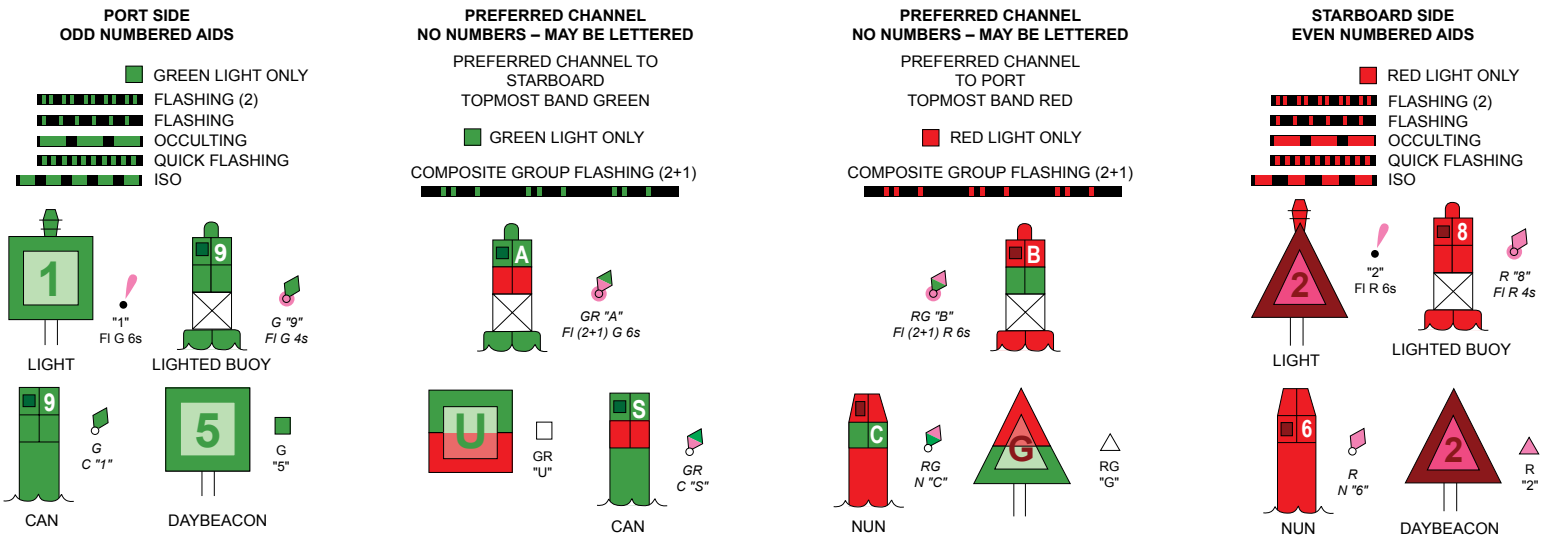


NOAA's navigation managers serve as ambassadors to the maritime community. They help identify navigational challenges facing professional and recreational mariners, and provide NOAA resources and information for safe navigation. For additional information, please visit *nauticalcharts.noaa.gov/service/navmanagers*

To make suggestions or ask questions online, go to *nauticalcharts.noaa.gov/inquiry*.
To report a chart discrepancy, please use *ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx*.

Lateral System As Seen Entering From Seaward

on navigable waters except Western Rivers



For more information on aids to navigation, including those on Western Rivers, please consult the latest USCG Light List for your area. These volumes are available online at *http://www.navcen.uscg.gov*

14500

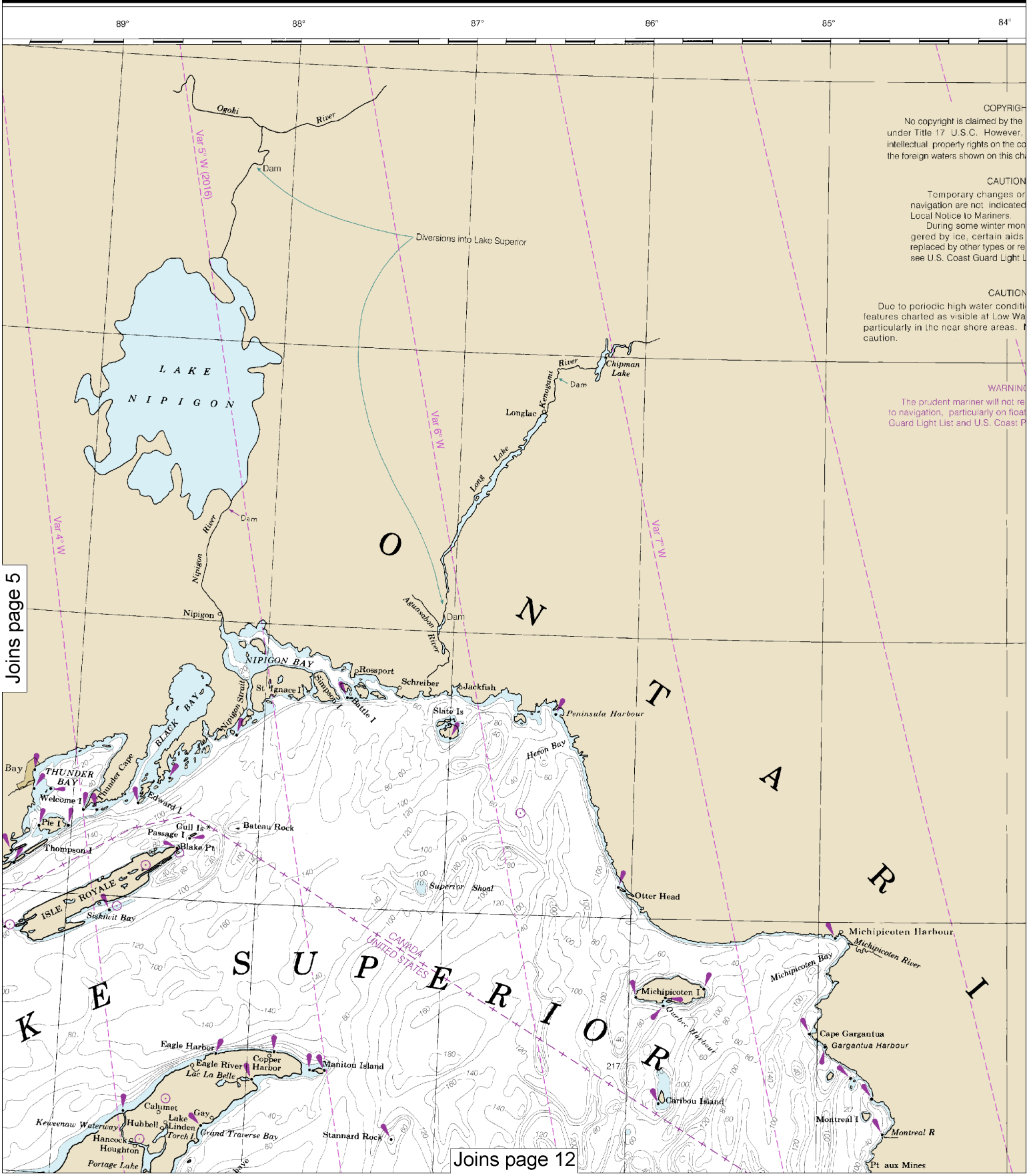
4

Note: Chart grid lines are aligned with true north.

Joins page 6

Joins page 11

This BookletChart was reduced to 75% of the original chart scale.
The new scale is 1:2000000. Barscales have also been reduced an
are accurate when used to measure distances in this BookletChart.



Joins page 5

Joins page 12

COPYRIGH
No copyright is claimed by the
under Title 17 U.S.C. However,
intellectual property rights on the co
the foreign waters shown on this ch

CAUTION
Temporary changes or
navigation are not indicated
Local Notice to Mariners.
During some winter mon
gered by ice, certain aids
replaced by other types or re
see U.S. Coast Guard Light L

CAUTION
Due to periodic high water conditi
features charted as visible at Low Wa
particularly in the near shore areas.
caution.

WARNIN
The prudent mariner will not re
to navigation, particularly on float
Guard Light List and U.S. Coast P

Note: Chart grid lines are aligned with true north.

83° 82° 81° 80° 79°

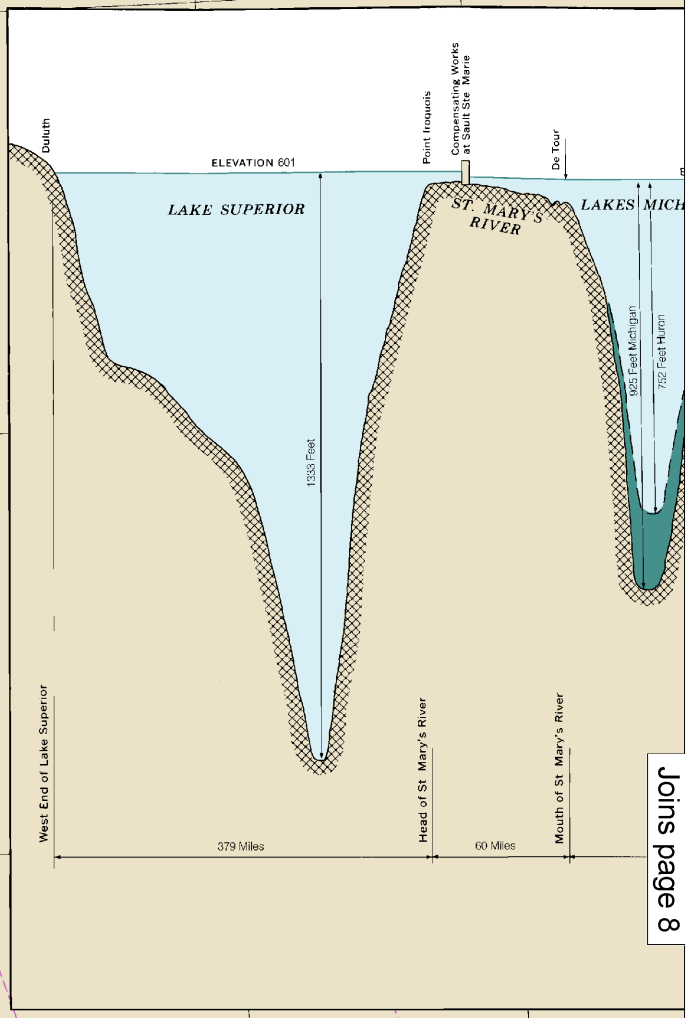
HT
e United States Government
r, other nations may claim
compilation of data depicting
chart.

N
or defects in aids to
ed on this chart. See

nths or when endan-
s to navigation are
removed. For details
t List.

N
tions in the Great Lakes, some
Water Datum may be submerged,
Mariners should proceed with

NG
ely solely on any single aid
ating aids. See U.S. Coast
Pilot for details.



Joins page 8

Genera
Length
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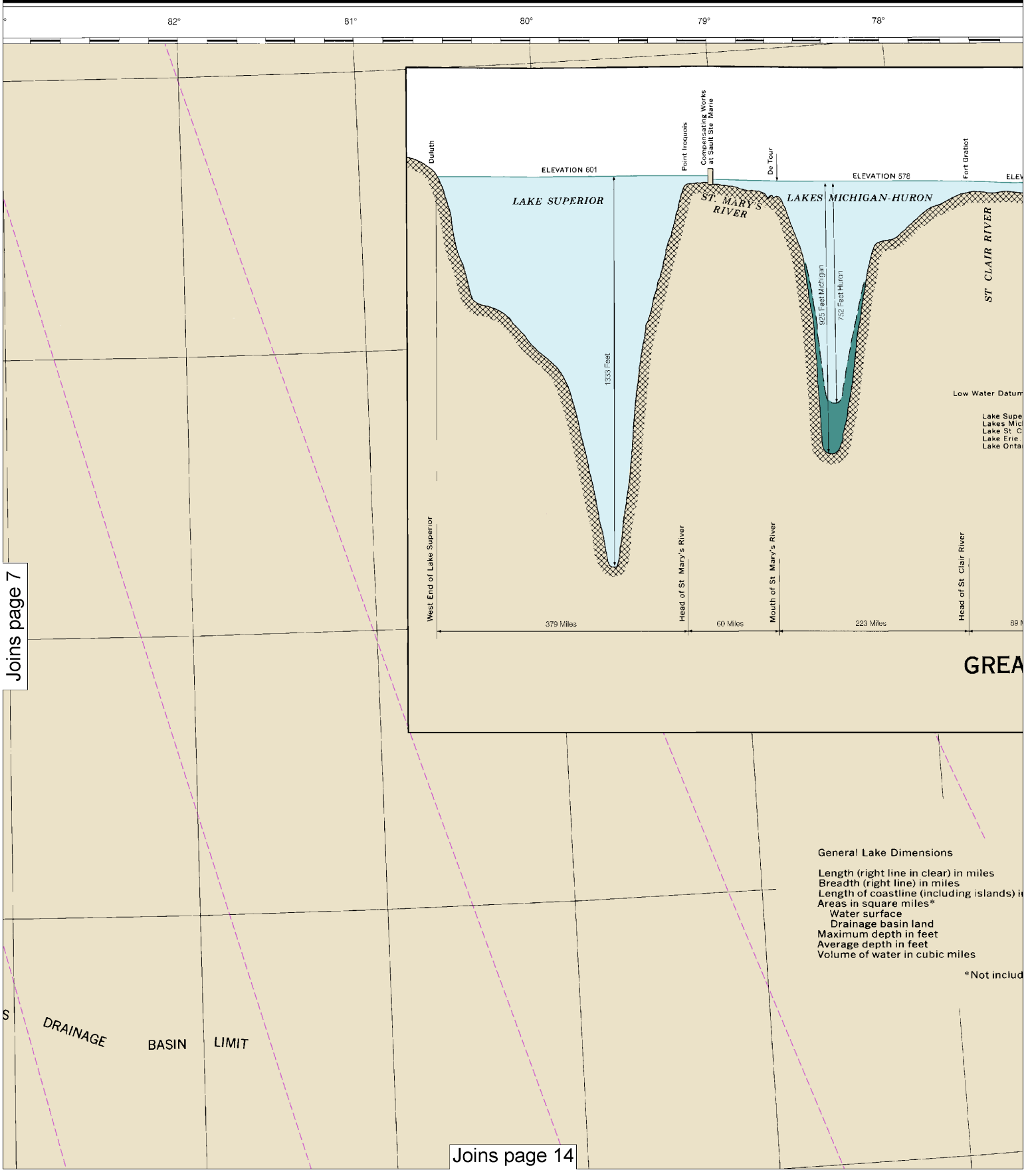
Volume

GREAT LAKES DRAINAGE BASIN LIMIT

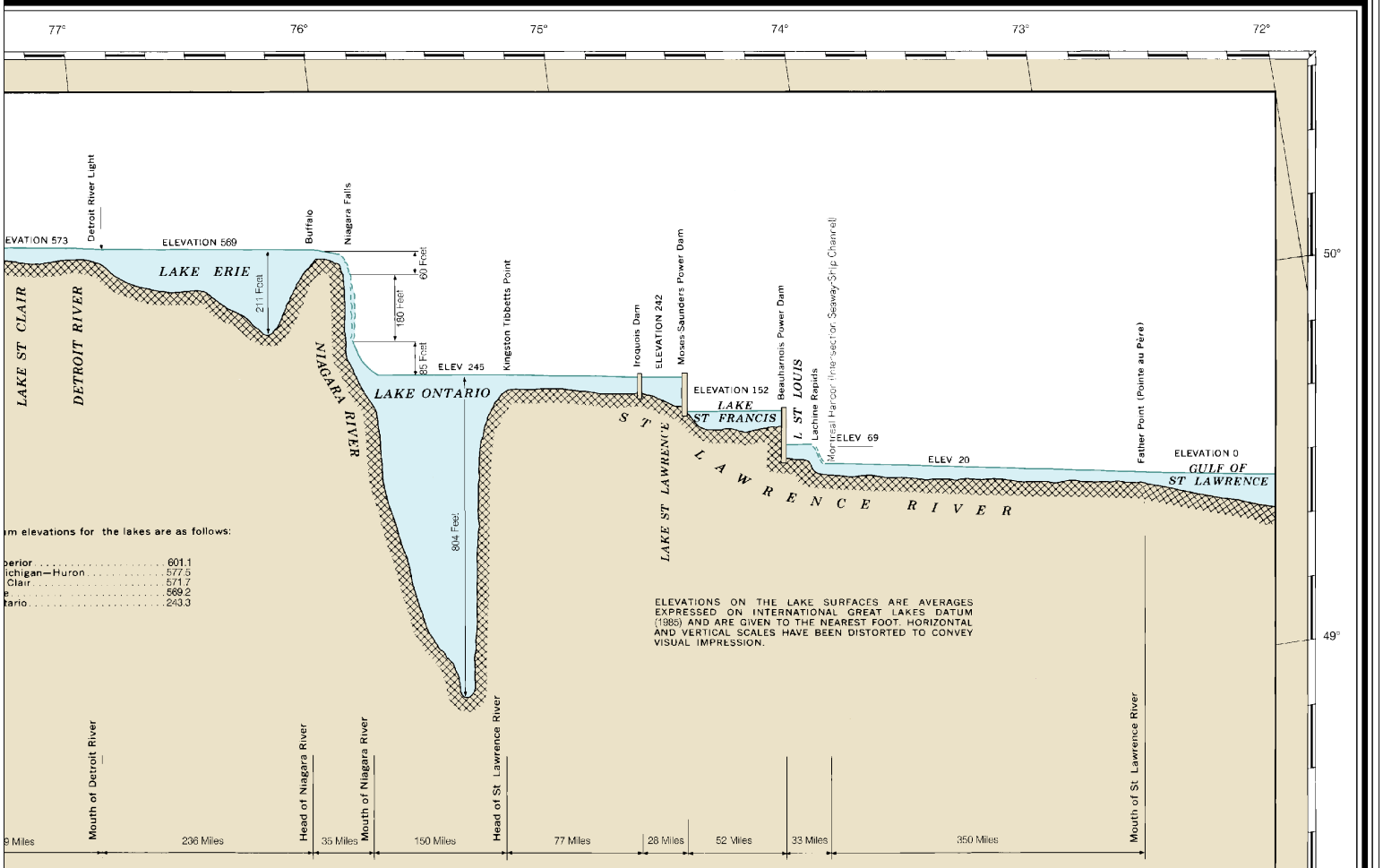
Joins page 13

Last Correction: 11/28/2016. Cleared through:
LNM: 4716 (11/22/2016), NM: 4816 (11/26/2016), CHS: 1016 (10/28/2016)



8

Note: Chart grid lines are aligned with true north.



AT LAKES–ST LAWRENCE RIVER
PROFILE

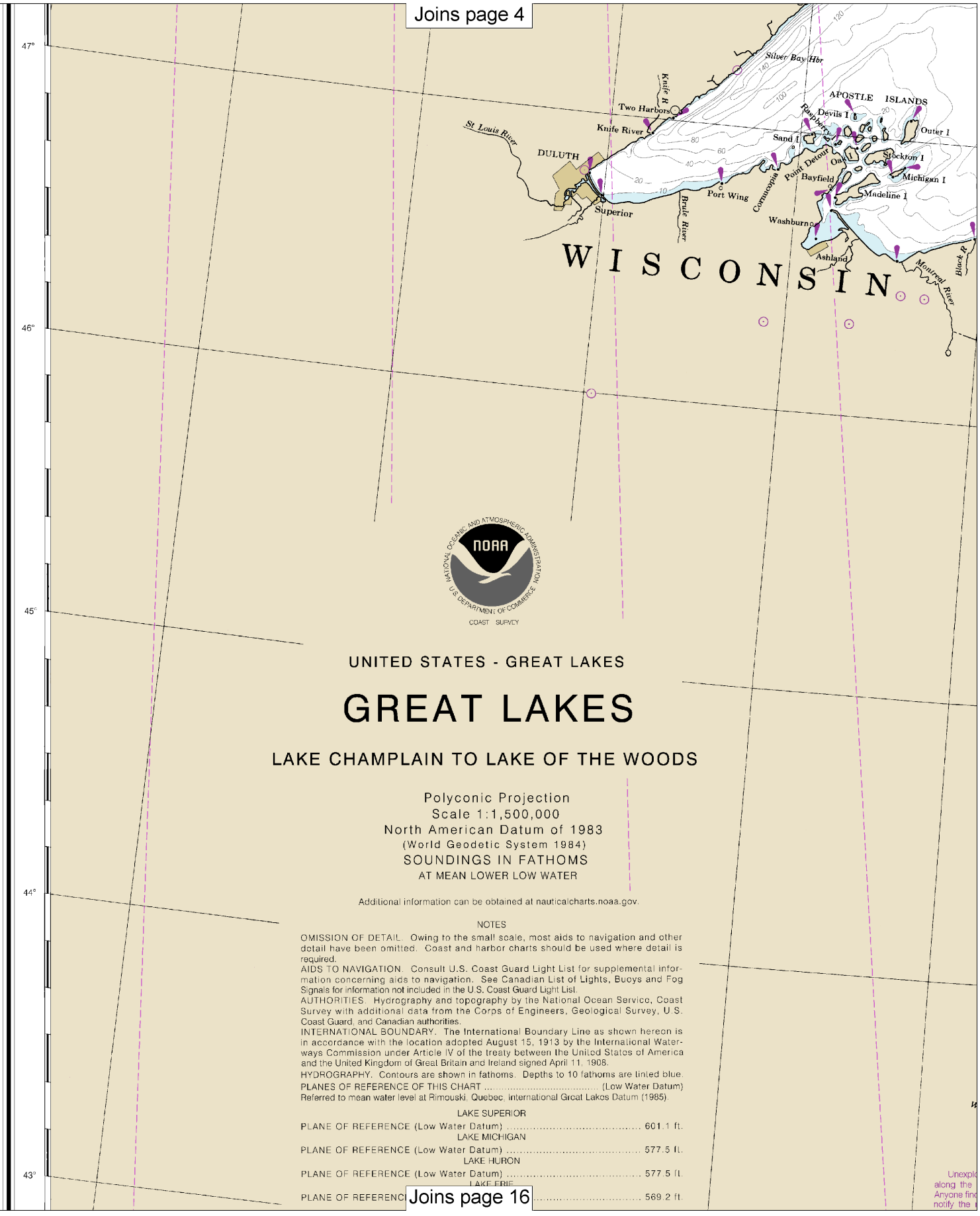
	Lake Superior	Lake Michigan	Lake Huron	Lake St Clair	Lake Erie	Lake Ontario
	350	307	206	26	241	193
	160	118	183	24	57	53
in miles	2,730	1,640	3,830	257	871	712
	31,700	22,300	23,000	430	9,910	7,340
	49,300	45,600	50,700	4,800	22,700	23,400
	1,333	923	750	21	210	802
	489	279	195	10	62	283
	2,935	1,180	849	1	116	393

ding the St Mary's, St Clair, Detroit, Niagara and St Lawrence Rivers

Var 15° W (2016)

Joins page 15

Joins page 4



UNITED STATES - GREAT LAKES

GREAT LAKES

LAKE CHAMPLAIN TO LAKE OF THE WOODS

Polyconic Projection
Scale 1:1,500,000
North American Datum of 1983
(World Geodetic System 1984)
SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

Additional information can be obtained at nauticalcharts.noaa.gov.

NOTES

OMISSION OF DETAIL. Owing to the small scale, most aids to navigation and other detail have been omitted. Coast and harbor charts should be used where detail is required.

AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation. See Canadian List of Lights, Buoys and Fog Signals for information not included in the U.S. Coast Guard Light List.

AUTHORITIES. Hydrography and topography by the National Ocean Service, Coast Survey with additional data from the Corps of Engineers, Geological Survey, U.S. Coast Guard, and Canadian authorities.

INTERNATIONAL BOUNDARY. The International Boundary Line as shown hereon is in accordance with the location adopted August 15, 1913 by the International Waterways Commission under Article IV of the treaty between the United States of America and the United Kingdom of Great Britain and Ireland signed April 11, 1908.

HYDROGRAPHY. Contours are shown in fathoms. Depths to 10 fathoms are tinted blue.

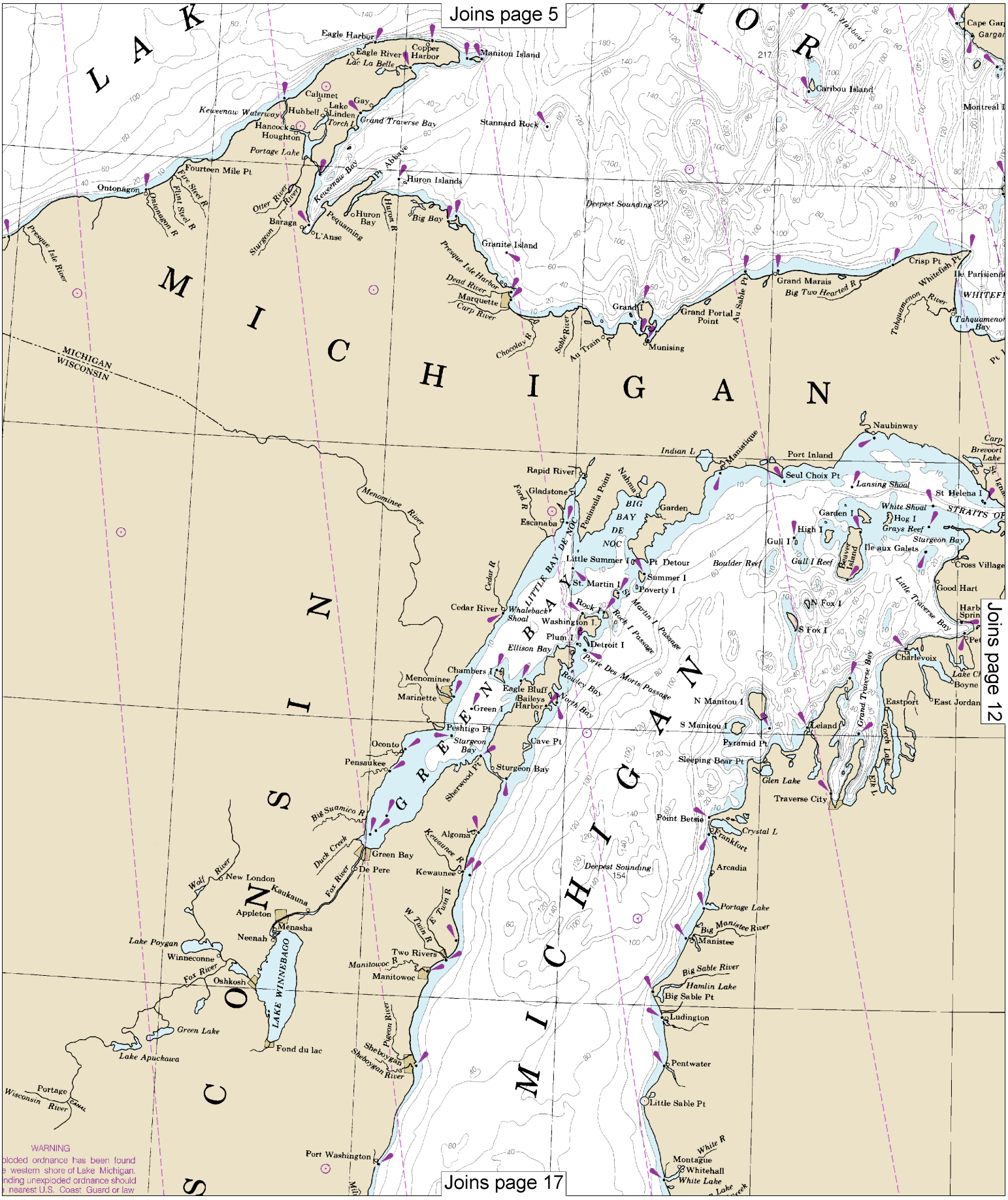
PLANES OF REFERENCE OF THIS CHART ..... (Low Water Datum)
Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985).

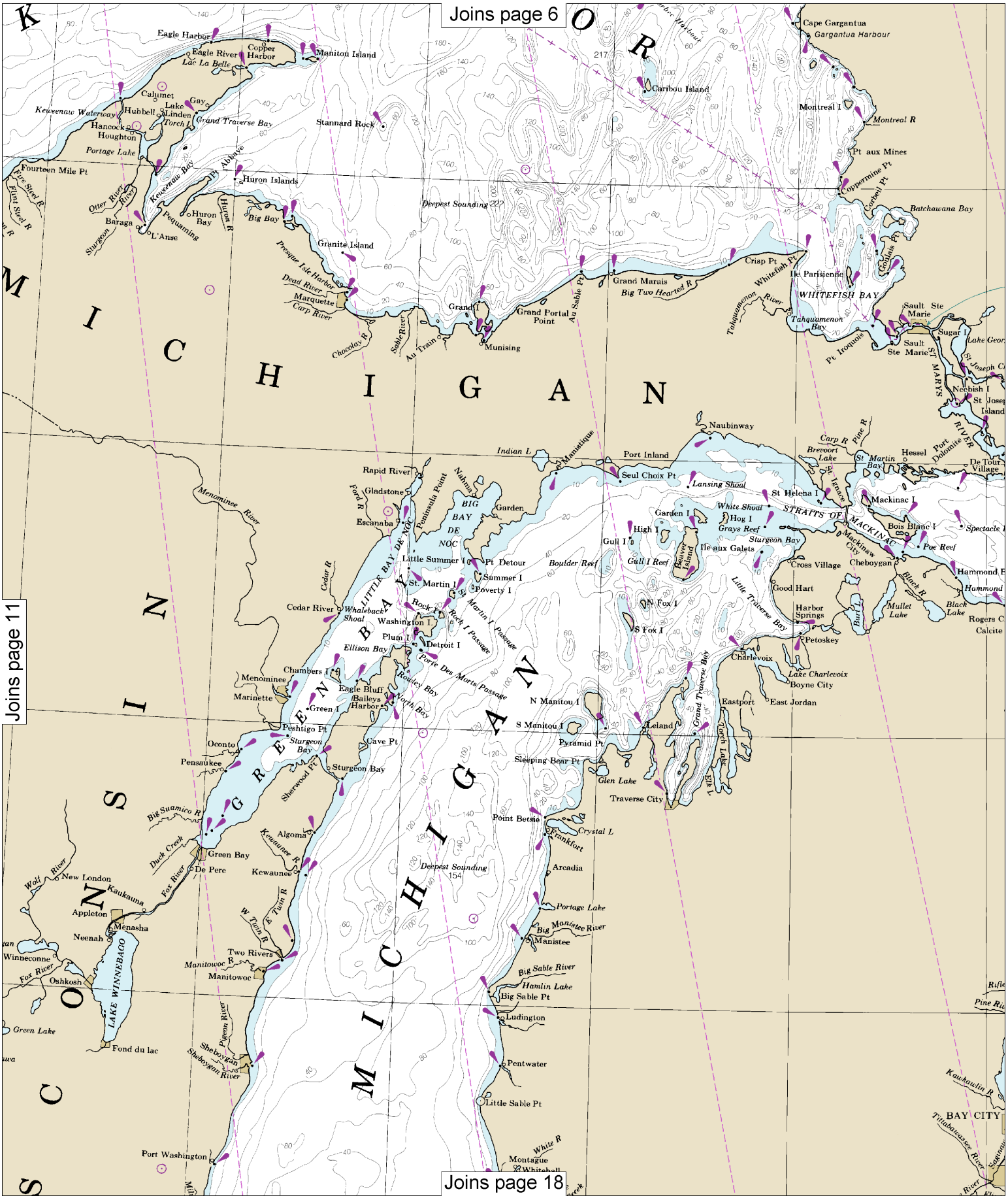
LAKE SUPERIOR
PLANE OF REFERENCE (Low Water Datum) ..... 601.1 ft.
LAKE MICHIGAN
PLANE OF REFERENCE (Low Water Datum) ..... 577.5 ft.
LAKE HURON
PLANE OF REFERENCE (Low Water Datum) ..... 577.5 ft.
LAKE ERIE
PLANE OF REFERENC ..... 569.2 ft.

Joins page 16

Unexplo
along the
Anyone find
notify the

Note: Chart grid lines are aligned with true north.


Joins page 5
Joins page 12
Joins page 17
LAKE MICHIGAN
WISCONSIN
MICHIGAN
MICHIGAN
Eagle Harbor
Eagle River
Copper Harbor
Manitou Island
Lac La Belle
Calumet
Lake Linden
Gay
Hubbell
Keweenaw Waterway
Hancock
Houghton
Portage Lake
Torch L
Grand Traverse Bay
Stannard Rock
Caribou Island
Fourteen Mile Pt
Ontonagon
Flint Steel R
Ontonagon R
Otter River
Keweenaw Bay
Pt Abbaye
Huron Islands
Baraga
L'Anse
Huron Bay
Pequaming
Big Bay
Deepest Sounding 222
Granite Island
Presque Isle River
Presque Isle Harbor
Dead River
Marquette
Carp River
Chocolay R
Sable River
Au Train
Grand I
Munising
Grand Portal Point
Au Sable Pt
Grand Marais
Big Two Hearted R
Crisp Pt
Whitefish Pt
Tahquamenon River
Tahquamenon Bay
Naubinway
Indian L
Manistique
Port Inland
Seul Choix Pt
Lansing Shoal
St Helena I
White Shoal
Hog I
Grays Reef
Sturgeon Bay
Garden I
High I
Gull I
Ile aux Galets
Gull I Reef
Beaver Island
Boulder Reef
Cross Village
Good Hart
Little Traverse Bay
N Fox I
S Fox I
Charlevoix
Boyne
Eastport
East Jordan
Leland
N Manitou I
S Manitou I
Pyramid Pt
Sleeping Bear Pt
Glen Lake
Traverse City
Grand Traverse Bay
North Lake
Elk L
Point Betsie
Crystal L
Frankfort
Arcadia
Deepest Sounding 154
Portage Lake
Big Manistee River
Manistee
Big Sable River
Hamlin Lake
Big Sable Pt
Ludington
Pentwater
Little Sable Pt
Montague
Whitehall
White Lake
White R
Rapid River
Gladstone
Escanaba
Ford R
Menominee River
Peninsula Point
Nahma
BIG BAY DE NOC
Garden
Little Summer I
Pt Detour
Summer I
St. Martin I
Poverty I
Cedar R
Cedar River
Whalebacks Shoal
Washington I
Rock I
Rock I Passage
St. Martin I Passage
Plum I
Detroit I
Ellison Bay
Porte Des Morts Passage
Boulder Bay
North Bay
LITTLE BAY DE NOC
Chambers I
Menominee
Marinette
Eagle Bluff
Baileys Harbor
Green I
Peshtigo Pt
Sturgeon Bay
Cave Pt
Oconto
Pensaukee
Sherwood Pt
Big Suamico R
Duck Creek
Green Bay
De Pere
Fox River
Algoma
Kewaunee R
Kewaunee
W Twin R
E Twin R
Two Rivers
Manitowoc R
Manitowoc
Wolf River
New London
Kaukauna
Appleton
Menasha
Neenah
Lake Poygan
Winneconne
Oshkosh
LAKE WINNEBAGO
Green Lake
Lake Apuckawa
Fond du lac
Pigeon River
Sheboygan
Sheboygan River
Port Washington
Portage
Wisconsin River
GREEN BAY
WARNING
ploded ordnance has been found
e western shore of Lake Michigan.
nding unexploded ordnance should
nearest U.S. Coast Guard or law



12

Note: Chart grid lines are aligned with true north.


Joins page 7
DRAINAGE BASIN LIMIT
Navigation Locks. Regulating works and power diversions.
Var 8° W
Var 9° W
Var 10° W (2016)
Var 11° W
QUEBEC
ONTARIO
LAKE HURON
GEORGIAN BAY
NORTH CHANNEL
MANITOULIN ISLAND
Manitoulin Basin
Six Fathom Bank
Six Fathom Scarp
Ipperwash Scarp
CANADA
UNITED STATES
PENINSULA
BRUCE
NOTTAWASAGA BAY
LAKE SIMCOE
LAKE NIPISSING
SAGINAW BAY
Joins page 14
Joins page 19
13

14

Note: Chart grid lines are aligned with true north.

Joins page 9


Q U E B E C
O N T A R I O
Var 13° W
Var 14° W
Var 15° W (2016)
47°
46°
45°
44°
43°
OTTAWA
Moses-Saunders and Long Sault Dams
CANADA
UNITED STATES
Iroquois Dam
Deepest Sounding
Joins page 21

Joins page 10

and the United Kingdom ... hed April 11, 1908.
HYDROGRAPHY. Contou... pths to 10 fathoms are tinted blue.
PLANES OF REFERENCE OF THIS CHART ..... (Low Water Datum)
Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985).

LAKE SUPERIOR
PLANE OF REFERENCE (Low Water Datum) ..... 601.1 ft.
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PLANE OF REFERENCE (Low Water Datum) ..... 577.5 ft.
LAKE HURON
PLANE OF REFERENCE (Low Water Datum) ..... 577.5 ft.
LAKE ERIE
PLANE OF REFERENCE (Low Water Datum) ..... 569.2 ft.
LAKE ONTARIO
PLANE OF REFERENCE (Low Water Datum) ..... 243.3 ft.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which, for charting purposes is considered equivalent to the World Geodetic System of 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 do not require conversion to NAD 83 for plotting on this chart.

MAGNETIC VARIATION

Magnetic variation curves are for 2016 derived from 2015 World Magnetic Model and accompanying secular change. If annual change is in same direction as variation it is additive and the variation is increasing. If annual change is opposite in direction to variation it is subtractive and the variation is decreasing. Places of large local disturbances are indicated in magenta thus: ◯

For Symbols and Abbreviations see Chart No. 1

Unexplo... along the ... Anyone find... notify the ... enforcemen...

43°
42°
41°
40°
93°
92°
91°
90°

Var 1° E

Var 1° W

Var 2° W

NO VARIATION (2016)

DISTANCES—STATUTE AND NAUTICAL MILES

	Quebec	Montreal	Tibbetts Point	Toronto	Port Weller	Port Colborne	Buffalo	Cleveland	Toledo	Detroit	Port Huron	Bay City	De Tour	Sault Ste Marie	Thunder Bay	Duluth	Mackinac Bridge	Milwaukee	Chicago
Statute	157	347	506	504	531	553	691	768	775	837	999	1061	1106	1379	1501	1084	1343	1408	
Nautical	136	302	440	438	461	481	600	667	673	727	868	922	961	1198	1304	942	1167	1224	
Statute		190	349	347	374	396	534	611	618	680	842	904	949	1222	1344	927	1186	1251	
Nautical		165	303	302	325	344	464	531	537	591	732	786	825	1062	1168	806	1031	1087	
Statute			159	157	184	206	344	421	428	490	652	714	759	1032	1154	737	996	1061	
Nautical			138	136	160	179	299	366	372	426	567	620	660	897	1003	640	866	922	
Statute				28	55	77	215	292	299	361	523	585	630	903	1025	608	867	932	
Nautical				24	48	67	187	254	260	314	454	508	547	785	891	528	753	810	
Statute					27	49	187	264	271	333	495	557	602	875	997	580	839	904	
Nautical					23	43	162	229	235	289	430	484	523	760	866	504	729	786	
Statute						22	160	237	244	306	468	530	575	848	970	553	812	877	
Nautical						19	139	206	212	266	407	461	500	737	843	481	706	762	
Statute							176	254	261	322	484	547	592	854	986	569	828	893	
Nautical							153	221	227	280	421	475	514	751	857	494	720	776	
Statute								96	108	170	331	394	438	711	833	417	675	740	
Nautical								83	94	148	288	342	381	618	724	362	587	643	
Statute									54	116	278	340	385	658	781	363	622	688	
Nautical									47	101	242	295	335	572	679	315	541	598	
Statute										62	224	286	331	604	726	309	568	633	
Nautical										54	195	249	288	525	631	269	494	550	
Statute											162	224	269	541	664	247	506	571	
Nautical											141	195	234	470	577	215	440	496	
Statute												187	232	504	627	210	468	534	
Nautical												162	202	438	545	182	407	464	
Statute													45	317	439	45	304	369	
Nautical													39	275	381	39	264	321	
Statute														272	394	90	349	414	
Nautical														236	342	78	303	360	
Statute															194	362	621	686	
Nautical															169	315	540	596	
Statute																485	743	808	
Nautical																421	646	702	
Statute																	259	324	
Nautical																	225	282	
Statute																		85	
Nautical																		74	

NOTE

The above table gives the shortest navigable distances between principal points on the Great Lakes to the nearest even mile; fractions of ½ mile or more being taken as a full mile and those under the half dropped. Distances on the St. Lawrence River are measured from the entrance to the St. Lawrence Seaway located at Montreal Harbor. For complete mileage tables of the Great Lakes and their connecting waterways, see the Great Lakes Pilot.

28th Ed., Oct. 2016

14500

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

NOAA encourages users to sub... about this chart at http://www.nautic...

Last Correction: 11/28/2016. Cleared through:
LNM: 4716 (11/22/2016), NM: 4816 (11/26/2016), CHS: 1016 (10/28/2016)

Note: Chart grid lines are aligned with true north.

ubmit inquiries, discrepancies or comments
ticalcharts.noaa.gov/staff/contact.htm.

SOUNDINGS IN FATHOMS

SOUNDINGS IN FATHOMS

Published at
U.S. DEPARTM
NATIONAL OCEANIC AND A
NATIONAL
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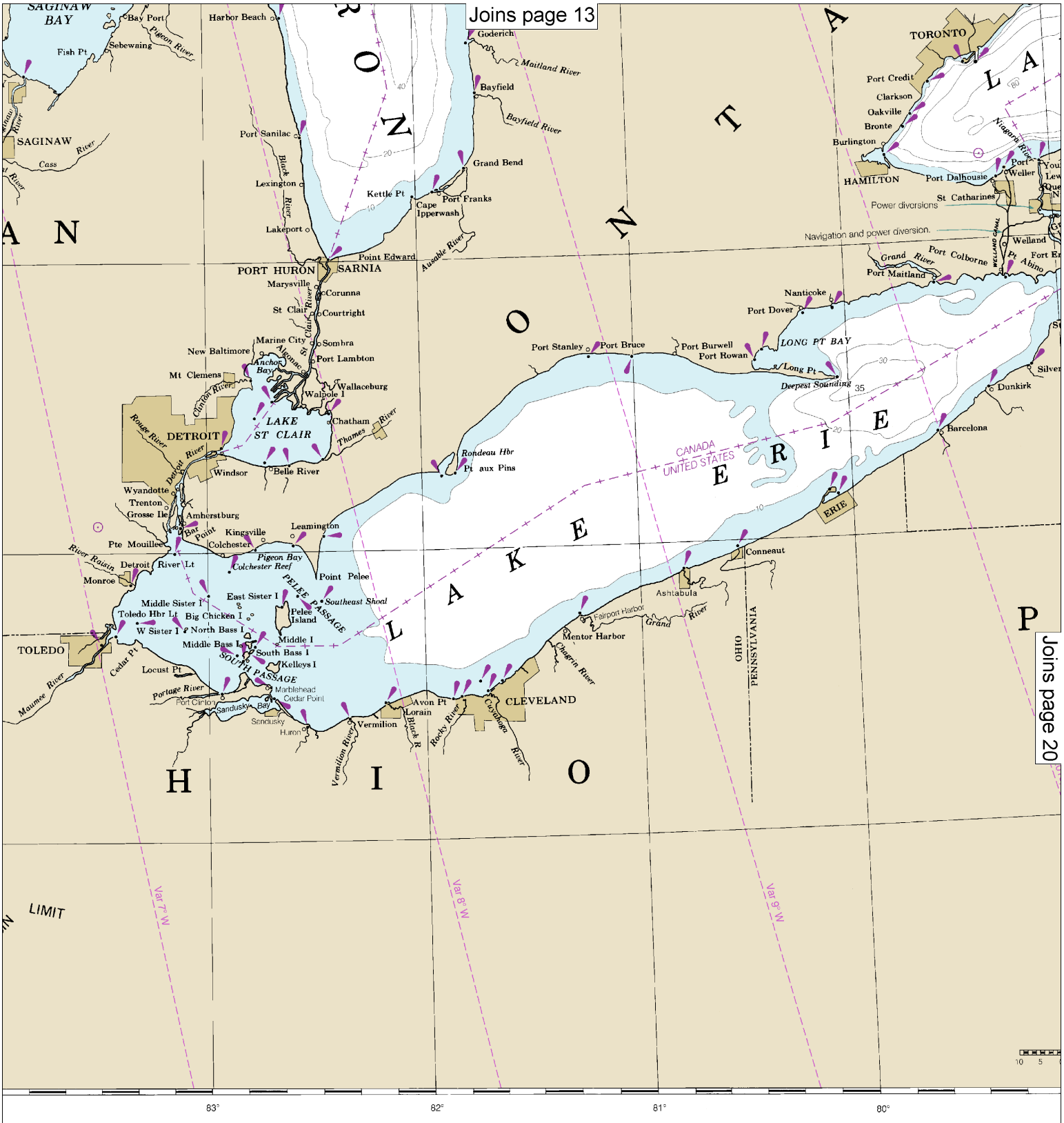
Note: Chart grid lines are aligned with true north.



at Washington, D.C.
MENT OF COMMERCE
ATMOSPHERIC ADMINISTRATION
L OCEAN SERVICE
AST SURVEY

20

Note: Chart grid lines are aligned with true north.

Great Lakes

SOUNDINGS IN FATHOMS - SCALE 1:1,500,000

14500

EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.
Channel 9 – Communications between boats and ship-to-coast.
Channel 13 – Navigation purposes at bridges, locks, and harbors.
Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.
Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.
Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!

All Hazards NOAA Weather Radio NOAA's National Weather Service

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.
http://www.nws.noaa.gov/nwr/

Quick References

Nautical chart related products and information	—	**http://www.nauticalcharts.noaa.gov**
Interactive chart catalog	—	**http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml**
Report a chart discrepancy	—	**http://ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx**
Chart and chart related inquiries and comments	—	**http://ocsdata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs**
Chart updates (LNM and NM corrections)	—	**http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html**
Coast Pilot online	—	**http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm**
Tides and Currents	—	**http://tidesandcurrents.noaa.gov**
Marine Forecasts	—	**http://www.nws.noaa.gov/om/marine/home.htm**
National Data Buoy Center	—	**http://www.ndbc.noaa.gov/**
NowCoast web portal for coastal conditions	—	**http://www.nowcoast.noaa.gov/**
National Weather Service	—	**http://www.weather.gov/**
National Hurrican Center	—	**http://www.nhc.noaa.gov/**
Pacific Tsunami Warning Center	—	**http://ptwc.weather.gov/**
Contact Us	—	**http://www.nauticalcharts.noaa.gov/staff/contact.htm**

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NOAA's Office of Coast Survey The Nation's Chartmaker